Exemplos com o LCD

Exemplo 1: Extraído do compilador Mikroe C

```c
// LCD module connections
sbit LCD_RS at LATE0_bit;
sbit LCD_EN at LATE1_bit;
sbit LCD_D4 at LATE2_bit;
sbit LCD_D5 at LATE3_bit;
sbit LCD_D6 at LATE4_bit;
sbit LCD_D7 at LATE5_bit;

sbit LCD_RS_Direction at TRISE0_bit;
sbit LCD_EN_Direction at TRISE1_bit;
sbit LCD_D4_Direction at TRISE2_bit;
sbit LCD_D5_Direction at TRISE3_bit;
sbit LCD_D6_Direction at TRISE4_bit;
sbit LCD_D7_Direction at TRISE5_bit;
// End LCD module connections

char txt1[] = "mikroElektronika";
char txt2[] = "2x16 LCD Testing";
char txt3[] = "Lcd4bit";
char txt4[] = "example";

char i;                                 // Loop variable

void Move_Delay() {                     // Function used for text
moving
  Delay_ms(500);                        // You can change the
moving speed here
}

void main(){
  ADPCFG = 0xFFFF;                      // Configure AN pins as
digital I/O

  Lcd_Init();                           // Initialize LCD

  Lcd_Cmd(_LCD_CLEAR);                  // Clear display
  Lcd_Cmd(_LCD_CURSOR_OFF);             // Cursor off
  Lcd_Out(1,6,txt3);                    // Write text in first row

  Lcd_Out(2,6,txt4);                    // Write text in second row
  Delay_ms(2000);
  Lcd_Cmd(_LCD_CLEAR);                  // Clear display

  Lcd_Out(1,1,txt1);                    // Write text in first row
  Lcd_Out(2,1,txt2);                    // Write text in second row

  Delay_ms(2000);

  // Moving text
  for(i=0; i<2; i++) {                  // Move text to the right 4
times
```

```
        Lcd_Cmd(_LCD_SHIFT_RIGHT);
        Move_Delay();
    }

    while(1) {                              // Endless loop
        for(i=0; i<5; i++) {                // Move text to the left 7
times
            Lcd_Cmd(_LCD_SHIFT_LEFT);
            Move_Delay();
        }

        for(i=0; i<5; i++) {                // Move text to the right 7
times
            Lcd_Cmd(_LCD_SHIFT_RIGHT);
            Move_Delay();
        }
    }
}
```

Exemplo 2:

```
/*
Mostrar um caractere em cada linha do LCD.
*/
// conexoes do modulo LCD
sbit LCD_RS at LATE0_bit;
sbit LCD_EN at LATE1_bit;
sbit LCD_D4 at LATE2_bit;
sbit LCD_D5 at LATE3_bit;
sbit LCD_D6 at LATE4_bit;
sbit LCD_D7 at LATE5_bit;

sbit LCD_RS_Direction at TRISE0_bit;
sbit LCD_EN_Direction at TRISE1_bit;
sbit LCD_D4_Direction at TRISE2_bit;
sbit LCD_D5_Direction at TRISE3_bit;
sbit LCD_D6_Direction at TRISE4_bit;
sbit LCD_D7_Direction at TRISE5_bit;
// Fim das conexoes do modulo LCD

void main(){
    //ADPCFG = 0xFFFF;                      // Configurar os pinos
analogicos como entrada/saida digital

    Lcd_Init();                             // Inicializar o LCD
    //Lcd_Cmd(_LCD_CLEAR);                  // limpar LCD
  // Lcd_Cmd(_LCD_CURSOR_OFF);             // Cursor off

    while(1) {                              // laco infinito
    Lcd_Cmd(_LCD_CLEAR);                    // limpar LCD
    Delay_ms(500);                          //Atraso de 250 ms
    Lcd_Chr(1, 3, 'A');                     //Escreve caractere A na
linha 1 coluna 3
    Delay_ms(500);                          //Atraso de 250 ms
```

```
  Lcd_Chr(2, 3, 'B');                    //Escreve caractere B na
linha 2 coluna 3
  Delay_ms(500);                         //Atraso de 250 ms
  }
}
```

Exemplo 3

```
/*
Mostrar uma string no LCD
*/
// conexoes do modulo LCD
sbit LCD_RS at LATE0_bit;
sbit LCD_EN at LATE1_bit;
sbit LCD_D4 at LATE2_bit;
sbit LCD_D5 at LATE3_bit;
sbit LCD_D6 at LATE4_bit;
sbit LCD_D7 at LATE5_bit;

sbit LCD_RS_Direction at TRISE0_bit;
sbit LCD_EN_Direction at TRISE1_bit;
sbit LCD_D4_Direction at TRISE2_bit;
sbit LCD_D5_Direction at TRISE3_bit;
sbit LCD_D6_Direction at TRISE4_bit;
sbit LCD_D7_Direction at TRISE5_bit;
// Fim das conexoes do modulo LCD

char text1[]="Estou bem...";
char text2[]="Eu tambem...";

// Programa Principal
void main()
{

        Lcd_Init();                        // Inicializar o LCD
        Lcd_Cmd(_LCD_CLEAR);               // limpar LCD
        Lcd_Cmd(_LCD_CURSOR_OFF);          // Cursor off

     while(1)
     {
             // Lcd_Cmd(_LCD_CLEAR);                 // limpar
LCD
              //Delay_ms(500);
              Lcd_Out(1,1,text1);
              Lcd_Out(2,1,text2);
             // Delay_ms(500);
     }

}
```